

Over the past year, ESA inspectors have identified nearly 9,000 defects regarding the maintenance of electrical equipment. The maintenance of electrical installations is important to ensure the predictability and reliability of safe electrical systems operation. The following are typical examples of defects where electrical equipment has not been maintained:

- Repair/replace of existing faulty or damaged devices (such as receptacles, luminaires, panel boards, disconnecting switches, etc.);
- Replacement of deteriorated equipment
- GFCI circuit breakers and/or receptacles fail to trip upon test
- Replace deteriorated knob-tube wiring



Rule 2-300, General requirements for maintenance and operation, of the Ontario Electrical Safety Code (the Code) requires all operating electrical equipment to be kept in safe and proper working condition. Additionally, the rule requires electrical equipment maintained for emergency service be periodically inspected and tested to ensure its fitness for service.

The intent of these requirements is to ensure electrical equipment will operate in a safe and predictable manner in response to operating demands. For example, a disconnect switch with corroded blades and/or springs may cause an arc flash when operated manually as the spring may not latch in a timely manner.

The rule also addresses safety concerns related to infrequently used electrical equipment requiring that it be thoroughly inspected before use and that damaged, deteriorated or defective electrical equipments and devices be:

- Put in a good order (i.e. safe operating conditions); or
- Permanently disconnected and replaced.

ESA strongly recommends that maintenance staff and facility operators perform periodic inspection and testing of electrical equipment to ensure it is in safe and proper working order.